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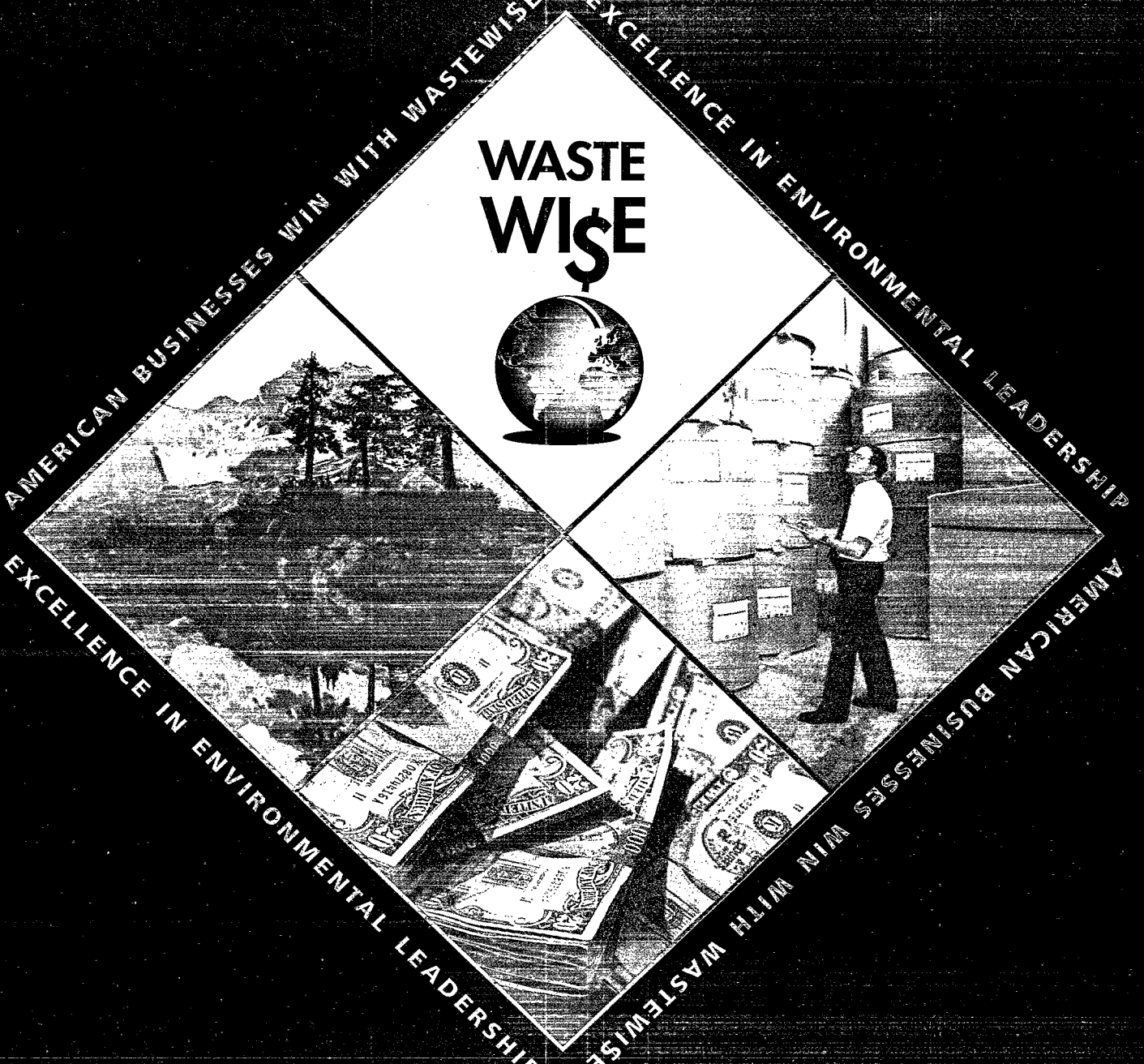
Second-Year Progress Report



WasteWi$e Welcomes New Partners Joining in 1995

AB&I

AlliedSignal, Inc.

Allied Waste Industries

Allstate Environmental

Appleton Papers Inc.

Applied Specialties, Inc.

ASARCO, Inc.– Copper Operations

Atlanta Medical Associates

Barn Again Furniture Company

Binney & Smith

Buckley's Quality Print Center

Cape Canaveral Marine Services Inc.

Charlottesville Wellness Center Family Practice

City Scrap and Salvage Company

Commonwealth Savings Bank

Communications Test Design, Inc.

Cooperative Power Association

Cosmair Inc.

The Curtis Center

Cytec Industries – Fortier Complex

Dartmouth Hitchcock Medical Center

Delta Air Lines, Inc.

The Dial Corp.

Dolco Packaging Corp.

Dow Chemical Company

DuPage Clean and Beautiful

Eastern Research Group

ECOCRATE

Fox and Goose Public House

Franks Steaks

Gambino Inn

Hallmark Cards

Harmon Electronics, Inc.

Harry S. Truman Coordinating Council

Harwick Chemical Corp.

High Life Sales Company

Hoechst Celanese Corp.

H.P. Direct

Hyde Manufacturing Company Inc.

Jackson-Cross Company Realtors

Janus Funds

J.M. Huxmann Gardening

Knight's Limited

Koetter and Smith, Inc.

Kosmos Recycling, Inc.

Kraft Foods/Power Logistics

Lawn & Leaf Service/The Organic Garden

L.R. Nelson Corp.

Majestic Metals, Inc.

Malden Mills Industries, Inc.

Marine Midland Banks, Inc.

Maverick Tube Corp.

Mid-America Regional Council (MARC)

National Waste Services

Nauticus – The National Maritime Center

Optical Coating Laboratories

Paradyne Corp.

Pennsylvania Power & Light Company

PEPCO

Perka Building Frames (USA) Inc.

Phillips Petroleum Company

Physicians Health Plan

Preston, Gates, and Ellis

Randolph County Progress Committee, Inc.

Recycle Technologies

Refuse Management Systems Inc.

Reynolds Metals Company

Rivertown Trading Company

Scheldes Restaurant

Schreiner's Restaurant, Inc.

The Scotts Company

Siegel Display Products

Silicon Graphics, Inc.

Southwestern Bell Mobile Systems

Stull Closure Technologies

Thomas Jefferson University Hospital

Toshiba America Information Systems

Total Petroleum - Denver Refinery

Trans World Airlines, Inc.

Triplex Direct Marketing Corp.

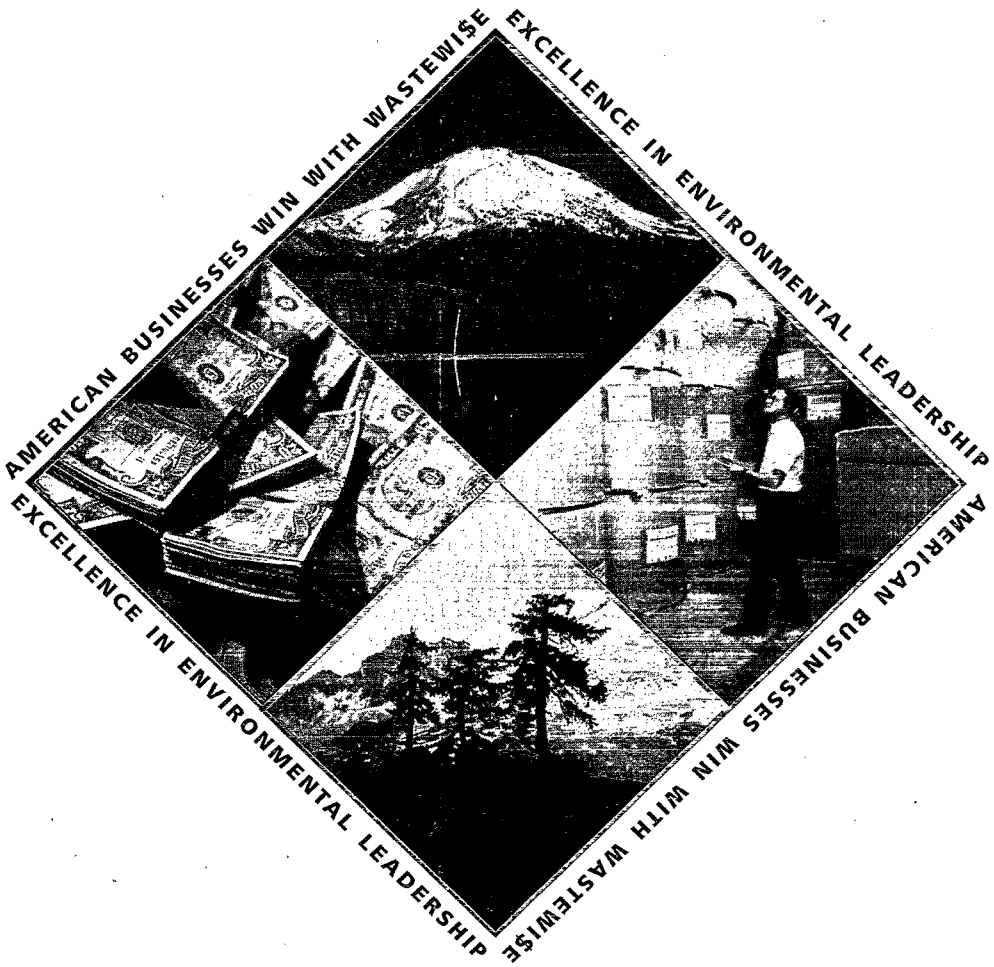
Truck-Lite Company, Inc.– Falconer Facility

Truck-Lite Company, Inc.– Wellsboro Facility

Union State Bank

University of Notre Dame

Vermont Small Business Development



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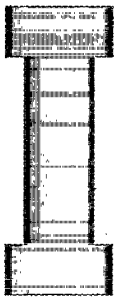


In 1995, WasteWi$e partners demonstrated, for the second year, that voluntary efforts to conserve resources and protect the environment can result in substantial and profitable environmental achievements. By any measure, the second year of the WasteWi$e program was a notable success. Close to 100 new partners joined the program and 40 endorser organizations promoted the benefits of WasteWi$e and solid waste reduction to their business members. Now, more than 500 organizations participate in the WasteWi$e program. Most importantly, WasteWi$e partners nearly *quadrupled* reported waste reduction over 1994 amounts, eliminating 344,000 tons of material through waste prevention, and recycling an additional 4.2 million tons of material. This represents a substantial diversion of material from landfills. More significantly, solid waste reduction reduces energy consumption and the emission of greenhouse gases that can contribute to global climate change. These larger scale environmental benefits are achieved by eliminating the need for some mining, manufacturing, and transportation activities associated with the manufacture of virgin products or goods no longer needed by a business.

American businesses clearly find it worth the effort to reduce solid waste. In 1995 WasteWi$e partners saved at least $59 million in purchasing costs just through efforts to reduce transport packaging. Reduction of transport packaging is a key cost-cutting opportunity for many companies. Other important cost-cutting strategies reported by WasteWi$e partners are reducing the use of office and business papers and reducing excess material in manufacturing processes. This report highlights the 1995 achievements of WasteWi$e partners, with a section devoted to each of the three elements of the WasteWi$e program—waste prevention, collection of recyclables, and

buying or manufacturing recycled products. The report includes many examples to illustrate the wide range of strategies available to reduce waste and cut costs.

These impressive results add to a growing list of environmental improvements achieved by organizations working with the U.S. Environmental Protection Agency (EPA) through an array of partnership programs. These programs address specific environmental problems through collaboration and innovative voluntary efforts rather than through additional regulations, and include the Common Sense Initiative, Project XL, and a family of sign-up programs known as the *Partners for the Environment Programs*. Partners for the Environment programs include WasteWi$e, Climate Wise, Water Alliances for Voluntary Efficiency (WAVE), and the Green Lights and Energy Star programs, among others.

None of these collaborative ventures would be successful if not for the initiative, commitment, and follow-through of the organizations that join with EPA as partners. While EPA can provide the framework for voluntary programs and some implementation assistance, the real work and results of the programs are achieved by changing day-to-day operations in thousands of facilities nationwide. An additional commitment EPA's partners take on is to measure and report their progress in implementing environmental initiatives, no small task in a time of highly streamlined business operations. EPA congratulates each WasteWi$e partner that reported results for 1995: you are contributing to the success of voluntary approaches to environmental improvement. We invite organizations that have not fully realized the benefits of solid waste reduction to learn from the successes of environmental leaders by joining the WasteWi$e program. Doing so will benefit your company's bottom line and the environment.

"We participate in many voluntary programs and feel that WasteWi$e is one of the most beneficial from both an economic and environmental standpoint."

Richard Larsen
Senior Scientist,
Environmental Programs
Northeast Utilities Service Company

Waste Prevention

Nineteen ninety-five marked the second year of the WasteWi$e program and an outstanding new record in our partners' reported waste reduction efforts. Partners conserved nearly 344,000 tons of materials through waste prevention activities—a 40 percent increase over 1994 waste prevention figures. Not only have WasteWi$e partners achieved impressive volume reductions, they have also reaped significant cost savings. These cost savings vary based on several factors, such as company size and the activity implemented. In avoided disposal fees alone, the reported waste reduction represents a potential savings of more than **$143 million.**[1]

Reduced purchasing costs also add up to big savings. For example, **Eastman Kodak Company** saved **$1 million** in purchasing costs by promoting an internal company materials exchange to recover valuable plumbing equipment such as valves and pipes. WasteWi$e estimates that partners achieved a potential savings of approximately **$59 million**[2] in avoided purchasing costs by reducing transport packaging in 1995, and saved an additional **$12.9 million**[3] through office paper conservation efforts.

Waste prevention, also known as source reduction, means using less material to get a job done. Waste prevention methods help create less waste in the first place—before recycling. If companies take a good look at their recycling collection data, they are likely to see ways to prevent waste first through waste prevention, thereby reducing purchasing costs and the amount of material that must be managed for recycling.

Herman Miller Cuts Waste Before Recycling

Herman Miller, a major manufacturer of office furniture, examined its recycling figures and decided it could reduce those materials through prevention efforts. By implementing electronic mail, voice mail, and duplex copying, the company decreased its high-grade office paper recycling rate by seven percent from 1994 to 1995. Herman Miller has set a goal of decreasing recycling through waste prevention activities by 10 percent each year over the next three years.

WasteWi$e Partners Reap Big Savings

These examples demonstrate the impressive cost-savings potential associated with waste prevention activities. On a per ton basis, waste prevention offers greater benefits than recycling or disposing of the same material, both for a company's bottom line and the environment.

- **Pepsi-Cola Company** saved $44 million by switching from corrugated to reusable plastic shipping containers for one-liter and 20-ounce bottles, conserving 196 million pounds of corrugated material.
- **Baxter International,** a manufacturer of healthcare supplies and equipment, saved $5.1 million in 1995 through packaging reductions, conserving 3.9 million pounds of material. Over a five-year period, Baxter reduced packaging by 21 percent (using 1990 as a baseline).
- **Eastman Kodak Company** earned $2.9 million in revenue from the sale of materials and assets for reuse that would otherwise be discarded.
- **Allergan,** a pharmaceuticals manufacturer, saved $2.5 million through packaging reduction actions, such as eliminating inner packaging from shipping containers, reducing packaging rejects through improvements in the production process, and reducing the weight (lightweighting) of plastic product bottles.
- **The Walt Disney Company** established a computerized tracking system for studio sets that facilitates revamping and reusing them. This effort conserved 528,000 pounds of wood and approximately $528,000. Previously, old sets were used to tape one show, then recycled or discarded.

To obtain the 1995 data, EPA requested all partners that joined WasteWi$e prior to August 1, 1995, to report on their progress for the year. A total of 208 partners submitted annual reports. Since not all reporting partners were able to measure their results for all activities, the number of companies reporting actual measurements for each activity described below is slightly smaller than the total reporting in most cases. Of the companies that reported 1995 results, 183 submitted information on waste prevention activities.

Key Waste Prevention Strategies

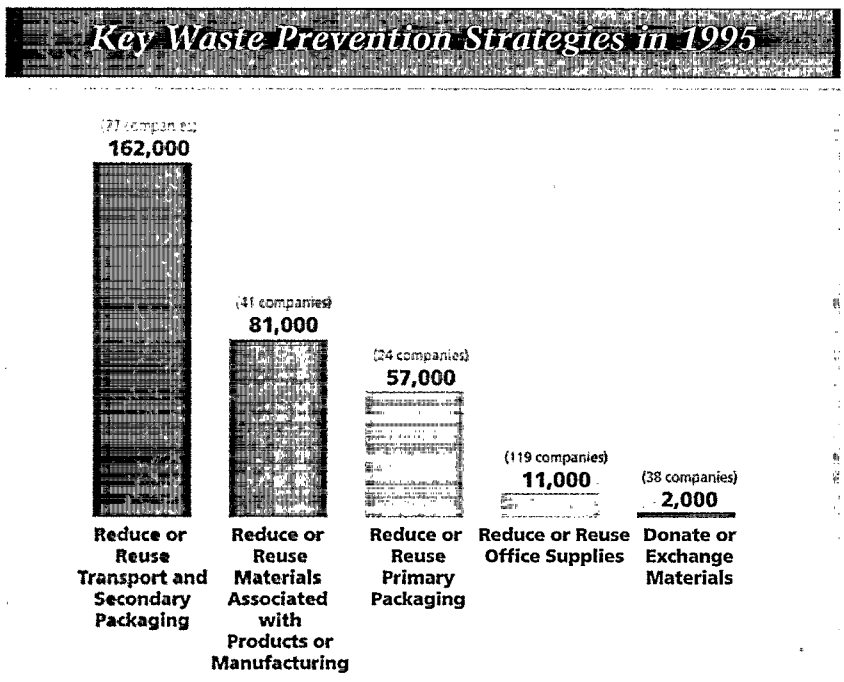
This section reviews the five key strategies used by WasteWi$e partners in 1995 to eliminate significant amounts of waste. More than one-third of the total materials eliminated were from reductions in primary, secondary, or transport packaging. Efforts included lightweighting, switching from one packaging option to another, repairing or reusing packaging, and redesigning or eliminating packaging. Other important waste prevention activities were reducing or reusing materials associated with manufacturing, reducing or reusing paper and other office supplies, and donating or exchanging materials and equipment. The key waste prevention strategies used to achieve these reductions are illustrated in Figure 1 and the examples below. Figure 2 depicts the materials reduced through these waste prevention efforts.

Reduce or reuse transport and secondary packaging

Transport packaging reductions are a major cost-savings opportunity for any company that ships or receives large volumes of goods. Reductions in secondary packaging, which is typically delivered with the product to the consumer and often serves as protective layers or product dividers, can also result in cost savings. In 1995, 77 WasteWi$e partners reduced or reused transport and secondary packaging, such as corrugated containers and wood pallets. Together, these companies conserved nearly 162,000 tons (324,000,000 pounds) of materials used for transporting goods.

- **General Mills** implemented waste prevention projects that conserved 42 million pounds of packaging materials. Selected projects included shortening flaps on corrugated shipping containers, redesigning shipping containers for cereal boxes, revising material specifications on mass merchandising units, and initiating a reusable tote system. Over a five-year period, General Mills reduced packaging by 21 percent.
- **HASBRO** reduced the thickness of corrugated shipping containers by 15 percent, which conserved more than 763,000 pounds of corrugated and saved $400,000.

Figure 1 *All figures in tons*



- **Land O'Lakes** eliminated corrugated pads and reduced the height of shipping containers for two product lines, resulting in the reduction of more than 356,000 pounds of corrugated material.
- **The Clorox Company** eliminated more than three million pounds of material by redesigning the corrugated cases used to transport products.
- **American Standard's** Trane Company facility in Trenton, New Jersey, an equipment manufacturer, conserved 400,000 pounds of corrugated by switching to returnable plastic containers for shipping electrical motors. The facility also reduced 120,000 pounds of wood by using more durable, reusable wood pallets for shipping air conditioning coils.
- **Abbott Laboratories,** a manufacturer of health-care products, redesigned secondary packaging to reduce wall thickness and change the configuration to increase efficiency, such as increasing the number of units per case, thereby decreasing corrugated board and paperboard by 300,000 pounds.
- **Herman Miller,** an office furniture manufacturer, reduced 44,900 pounds of plastic secondary packaging materials by eliminating or reducing filler materials and strapping.

Working With Suppliers Can Benefit Everyone's Bottom Line

Schlegel Corp., a medium-sized manufacturer of urethane, textile, and plastic products in Rochester, New York, successfully worked with a raw materials supplier to switch from corrugated and wooden shipping containers to more durable plastic containers. The many benefits of this switch include:

- Elimination of approximately 30,000 pounds per year of corrugated and wood packaging, a significant waste stream for Schlegel.
- Conservation of valuable warehouse storage space, a result of the plastic containers folding flat.
- Reduction in the price of raw materials from the supplier.
- Reduction of labor costs related to handling and storing the containers.

Similar benefits and cost savings were realized by the raw material supplier as well. This was clearly a win-win situation for Schlegel Rochester, the supplier, and the environment.

Tracy Pope, Environmental & Safety Officer, Schlegel Corp.

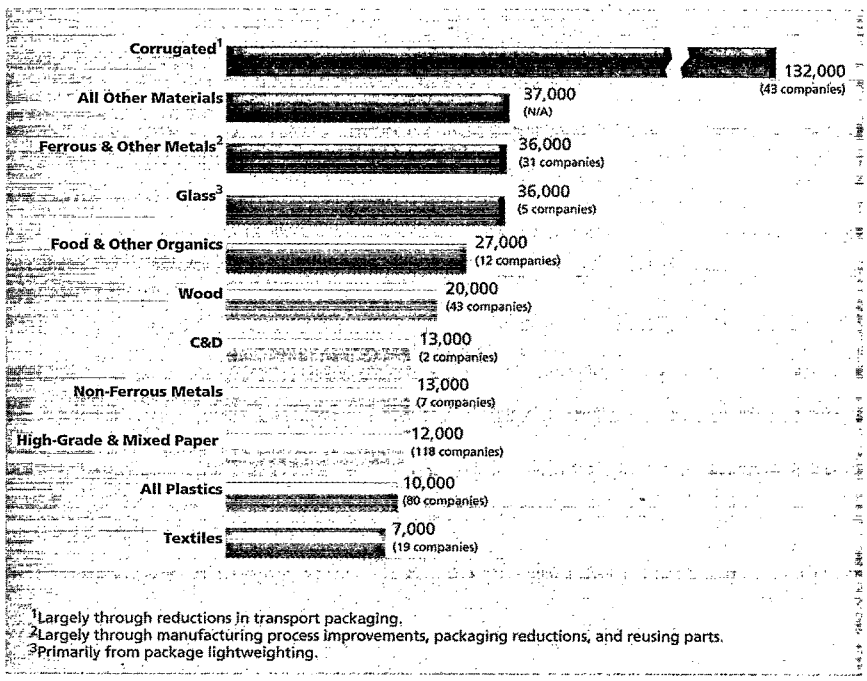
Reduce or reuse materials associated with products or manufacturing

Among the ranks of successful WasteWi$e partners are many manufacturers and service companies, 41 of which reported reducing or reusing the materials and supplies associated with producing their products. These efforts, which conserved 81,000 tons (162,000,000 pounds) of material, included improving production processes and equipment, using less material to produce a product, and finding new ways to reuse supplies, equipment, and raw materials.

- **Bell Atlantic** eliminated 5.8 million pounds of paper by changing the specification for the printing of its telephone directories to reduce the amount of paper required. For example, the company reduced the basis weights for many incidental pages, such as coupons, indexes, and showcase pages. The actual dimensions of the directories were also reduced, some listing rules were streamlined, and Customer Guides were shortened.
- **Reynolds Metals'** Kansas City facility saved nearly $900,000 and conserved more than one million pounds of aluminum by reducing the thickness of aluminum used to manufacture cans and improving its production process to reduce waste.

Figure 2 *All figures in tons*

Materials Conserved Through Waste Prevention in 1995



[1]Largely through reductions in transport packaging.
[2]Largely through manufacturing process improvements, packaging reductions, and reusing parts.
[3]Primarily from package lightweighting.

- **NEPTCO Inc.,** a manufacturer of wire and cable products, implemented quality improvement strategies in 1995 which included employee incentives to decrease scrap and nonconforming product levels. These efforts saved the company $12,500 in disposal costs and 281,000 pounds of materials.
- **Avondale Mills,** a textiles manufacturer, purchased and installed a reclamation system for process fibers. Leftover fibers from reprocessing are given to a feedmill to make cattle feed. In 1995, the company diverted 600,000 pounds of cotton fiber from disposal and saved $9,000 in disposal costs.
- **Courier Times,** a medium-sized printing and publishing firm, saved $11,000 and reduced more than 37,000 pounds of print waste through the increased awareness and efficiency of the printing press operators.
- **The Earthgrains Company** (formerly Campbell Taggart), a grains-based food manufacturer, supplied 53 million pounds of food scraps from its manufacturing process to farmers for reuse as animal feed.
- **Motorola** collected cleanroom booties and gloves at one facility for reprocessing and reuse, conserving 140,000 pounds of mixed plastic clothing.

"Measuring our 1995 WasteWi$e results has heightened our awareness of the value and environmental worth of our waste reduction endeavors. We are ready to redouble our efforts in 1996. Thank you for showing us the way."

Gerald Porter, Jr.
Facilities Manager
First National Bank & Trust Company of the Treasure Coast

Reduce or reuse primary packaging

Targeting primary packaging for reduction and reuse opportunities is a key strategy for manufacturers. Twenty-four WasteWi$e partners reported reductions in primary product packaging in 1995, conserving 57,300 tons (114,600,000 pounds) of materials.

- **The Coca-Cola Company** reduced aluminum consumption by 13.2 million pounds by slightly decreasing the size of its beverage can lids.
- **Target Stores** eliminated three million pounds of plastic bags formerly used to package clothing; this initiative enabled Target to reach its goal of reducing "softlines" packaging by 95 percent.
- **Maytag's** Newton Laundry Products conserved 2.4 million pounds of corrugated by reducing the amount of packaging for finished products.
- **Hewlett Packard** redesigned the packaging for its ink-jet printer cartridges to use less material, resulting in a reduction of 2.8 million pounds of various packaging materials.
- **Avondale Mills,** a textile manufacturer, began taking back yarn cones from customers and reusing them, conserving 70,000 pounds of polypropylene and saving $50,000.
- **Procter & Gamble** implemented several activities that conserved more than four million pounds of primary packaging materials. The company lightweighted a polyethylene terephthalate (PET) bottle design, reduced high density polyethylene (HDPE) and PET packaging by delivering concentrated products, and eliminated some boxboard packaging for skin care products.

Innovations in Office Waste Prevention

Bank of America's Creative Strategies to Reduce Office Paper

Bank of America reduced consumption of office paper by nearly 8.5 million pounds in 1995. The company continues to implement a wide range of innovative efforts to reduce paper use, such as:

- **New software-based "laser letterhead."** The software uses standard pre-printed, two-color corporate signature letterhead that is not customized with name, title, or address. Users enter personalized information onto a PC-based template that prints with the text of the letter. This program allows users to update personalized information as necessary and print the exact quantity required. Benefits include a 56 percent cost savings over pre-printed letterhead, and zero waste when employees change their address, title, or other information.
- **A pilot test of six printers capable of duplex printing, which reduce paper consumption up to 30 percent over conventional printers.** A larger roll-out of duplex printers will take place in 1996.

Alyeska Achieves Savings From Binder Reuse

Alyeska Pipeline Service Company uncovered an innovative way to recapture and reuse vinyl three-ring binders. Previously, most binders were damaged and rendered unusable by smeared toner on the outer plastic sleeve and on the inside front cover. Alyeska devised a solution to this problem that substantially increases the useful life of the binders.

Now, when the Print Shop assembles a document, a clear plastic sheet is inserted in front of the title page and spine label, thus protecting the outer plastic sleeve. A second clear plastic sheet is also inserted immediately inside the front cover to protect that area.

Employee participation is a key element in the success of this program. New binders cost more than $4.45 each. With a 50 percent rate of recapture and a continued demand of 42,000 binders per year, Alyeska projects cost savings to reach $40,000 per year. All future company manuals and other documents will contain the plastic inserts and be reused in later productions. Each document will include an information sheet to remind employees and contractors about the importance of waste reduction and how the binder reuse program works.

Reduce or reuse office supplies

Any company with office operations should be able to identify cost-saving opportunities through the reduction and reuse of supplies, especially through reductions in office paper use. In 1995, 119 WasteWi$e partners reported on projects to reduce or reuse office supplies and equipment, resulting in the conservation of more than 10,700 tons (21,400,000 pounds) of materials. Nearly all of the office supplies reduced were high-grade or other types of paper, including printer and copier paper, stationery, and envelopes. The amount of measured waste prevention would likely have been higher if not for the challenges many companies face in measuring reductions in paper use. As the examples below illustrate, WasteWi$e partners have found many ways to reduce office paper and other supplies.

"We appreciate EPA's WasteWi$e program, which provides us with opportunities to share our successes and learn from other WasteWi$e partners."

Jack Shih
Manager of
Environmental Affairs
Navistar International
Transportation Corp.

- **CITGO Petroleum** conserved 753,000 pounds of paper by utilizing electronic viewing techniques, such as managers viewing reports on line, thereby reducing the number of pages printed.
- **Aetna Inc.** saved $144,000 from an inter-office supply and equipment recapture program and reused more than 128,000 pounds of supplies and equipment such as calculators and fax machines.
- **Union Carbide,** a chemical manufacturer, sends used toner cartridges to a remanufacturer; in 1995 this activity saved $75,000 through the reuse of about 700 cartridges.
- **Radio Flyer,** a manufacturer of red wagons and other toys, eliminated 150,000 pounds of glossy labels by printing product information directly on the corrugated cartons. The labels, previously used as a marketing tool, were no longer needed since merchants began displaying assembled products rather than cartons. This action saved the company $37,500 over two years.
- **CSX Transportation** implemented duplex copying and the use of electronic mail at 334 locations, resulting in the reduction of 596,000 pounds of office paper. The company also saved 1,000 pounds of paper by eliminating the use of paper training manuals. Instead, CSX conducted multi-media training via computer, featuring written text, video clips, and other interactive elements.
- **BellSouth Telecommunications** began printing double-sided customer bills in 1995. This activity reduced more than 1.3 million pounds of paper and saved $535,000 in paper purchasing costs. In addition, BellSouth used electronic data interchange (EDI) to increase electronic billing by six percent, reducing paper consumption by 7,500 pounds and saving $54,000.

Employee Education Pays Off at Janus Funds

Janus Funds, a medium-sized Colorado financial and mutual funds firm, saved $31,200 and conserved more than 40,000 pounds of paper in 1995. Employee participation played a key role in these savings. The company formed a six-person Paper Reduction Committee to educate employees on paper conservation and to monitor progress throughout the various departments.

Committee members met with employees from each department and educated them on various methods for reducing paper consumption. Each department was asked to sign a form committing to three specific paper reduction goals. Example goals included reducing the distribution of lengthy memos, using e-mail, and duplex copying. Committee members informed the departments that they would follow up at a later date to determine the progress on the goals.

The Paper Reduction Committee developed a measurement form for each department to use for assessing its goals and reporting the results.

Donate/Exchange materials

By donating and exchanging materials, 38 WasteWi$e partners diverted more than 2,100 tons (4,200,000 pounds) of material from disposal in addition to assisting schools and other nonprofit groups.

- **Texaco** donated 120,000 pounds of building materials, such as lights and ceiling tiles from remodeling projects, for reuse by nonprofit groups. The company also donated 4,000 pounds of computer equipment and furniture to nonprofits.
- **The Gillette Company** donated 12,500 pounds of materials, such as polystyrene and corrugated packaging and promotional items, to the Boston Schools Recycle Center. Teachers use materials for experimental and innovative classes. The company also donated more than 1,300 pieces of office furniture and equipment, such as desks, computers, and printers, to local charitable and educational organizations.
- **Rivertown Trading Company** donated more than 11,000 pounds of packaging peanuts, gift wrapping materials, stationery, and computer equipment to local organizations.
- **Apple Computer, Inc.** distributed 10,000 pounds of used office supplies and small equipment to local school districts in Santa Clara Valley, California.
- **NEC Electronics, Inc.** donated more than 29,000 pounds of various items to nonprofit and other organizations. For example, the company donated polystyrene peanuts and bubblewrap to a local store that mails packages.

ENDNOTES

[1] This figure is based on an average 1995 U.S. tipping fee of $32.19 per ton, a value reported by Solid Waste Digest, 1995.

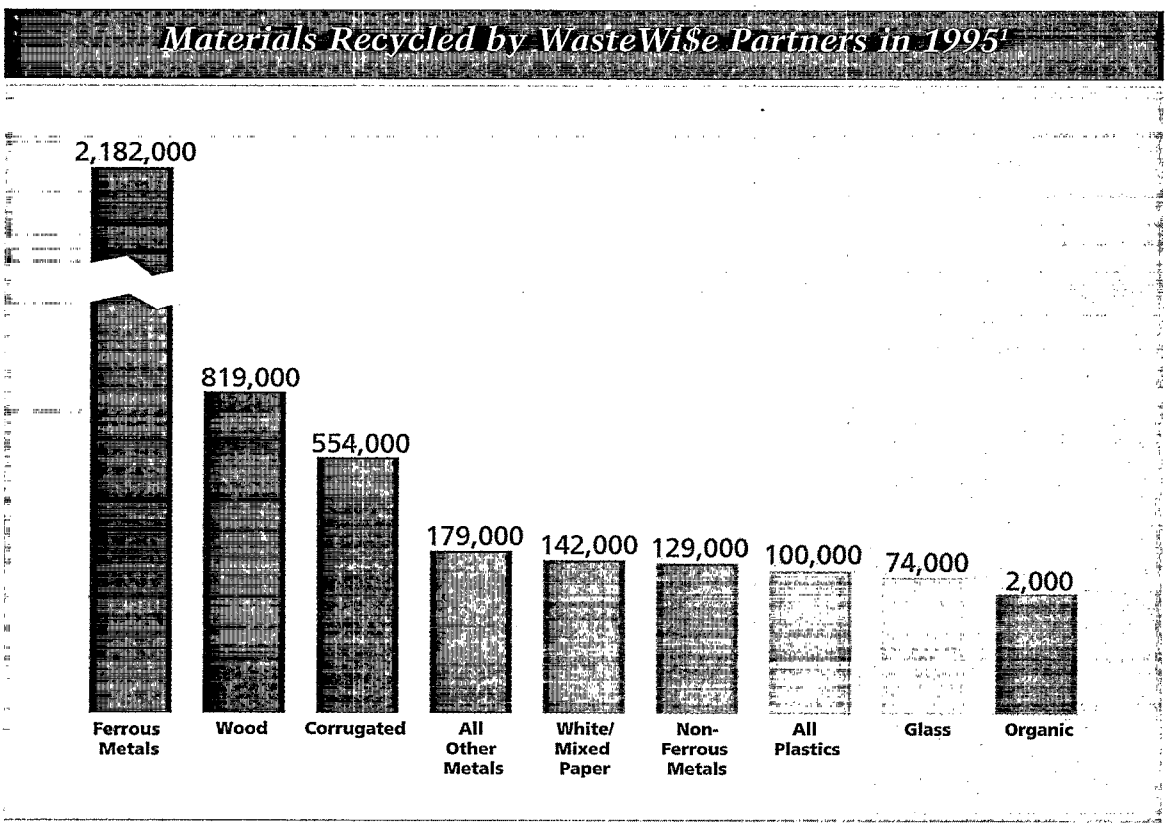
[2] This figure is based on an extrapolation of cost savings data provided by WasteWi$e partners in 1995.

[3] This figure is based on a 1995 national average cost of $1,095 per ton of high-grade office paper, as derived from low-end costs reported by Pulp & Paper, 1995.

Recyclables Collection

Although 1995 was a volatile year for many recyclables markets, WasteWi$e partners maintained or expanded their collection activities. In 1995, 192 WasteWi$e partners recycled nearly 4.2 million tons of material—a 400 percent increase from the 956,000 tons reported in 1994. Figure 3 illustrates the materials collected in largest amounts by WasteWi$e partners. Because WasteWi$e recycling goals are often integrated into overall company recycling efforts, the amount of materials collected specifically as a result of WasteWi$e activities can be difficult to separate from overall recycling figures. Many companies did not attempt to differentiate recyclables collected as part of WasteWi$e goals from total recyclables collected in 1995. One hundred five companies did report specifically on WasteWi$e goal amounts, resulting in a total of 885,000 tons collected.

Figure 3 *All figures in tons*



[1] WasteWi$e and Non-WasteWi$e Activities

Successful Recycling Strategies

In 1995, WasteWi$e partners found new ways to expand and improve their recycling programs. Partners expanded their efforts by adding new materials for recycling, educating employees and the community, finding new ways to increase collection of materials already recycled, and increasing the recyclability of materials. Some successes in each of these areas are featured below.

Adding new materials

Identifying new materials to collect for recycling is an ongoing process, and a key component of a successful recycling program. The two companies below benefitted from their search for new recycling opportunities.

- **First National Bank & Trust Company of the Treasure Coast** collected 150,000 pounds of computer and printer paper. Prior to implementation, approximately 65 percent of this paper was shredded by bank staff and landfilled. By switching to recycling, the company saved $14,000 in avoided disposal costs.
- **Haworth,** one of the largest office furniture manufacturers in the United States, conducts monthly audits to identify new waste reduction opportunities. An audit in 1995 revealed that powder coat paint could be recycled. The company recycled 96,500 pounds as a result.

Employee education

Employee education can often be the key to successful company waste prevention and recycling programs. In 1995, the following three companies took a creative approach to keeping employees involved.

- **Office Plan,** a furniture manufacturer, hosted a half-day recycling and waste prevention seminar for all members of the company. Employees were given a "lab test" of 60 objects and materials used in the office and warehouse to survey their knowledge of what can and cannot be recycled. The quiz was later graded and discussed, and a prize was awarded to the employee with the highest score.
- **Stonyfield Farm Yogurt** launched an employee awareness campaign. The program included a monthly recycling report in the company's internal newsletter, presentations and question and answer sessions with every department, educational posters about what is recyclable and why it should be recycled, and small employee incentives, such as coupons and mugs.
- **Bank of America** established a recycling hotline called Wasteline for employees, which received more than 400 calls on such topics as extra pickups, sorting, and supplies for recycling.

Community outreach

Many companies find that building partnerships for recycling within their communities is a rewarding way to benefit both the environment and their neighbors.

- **Pennsylvania Power and Light** donates its recyclable mixed paper to a center for people with learning disabilities. The center sorts and sells the materials and keeps all revenues.
- **Virco Manufacturing,** a school and office furniture manufacturer, assisted a local school district in initiating a corrugated recycling program. Thirteen bins were built and placed at all district schools. Within nine months, schools collected more than 85,000 pounds of corrugated which Virco sold, generating $3,800 in revenue for the school district.
- **Ford Motor Company** cosponsored an exhibit called "The Stinking Truth About Garbage." It is on display through 1998 at the Chicago Children's Museum and focuses on educating children on the need to reduce, reuse, and recycle. Most recently, Ford sponsored a traveling 6,000 square foot exhibit titled "EarthQuest." This exhibit is touring museums through 2000 and also focuses on educating children on the need to reduce, reuse, and recycle.

"WasteWi$e provides an excellent program to help us revitalize recycling efforts and make inroads where recycling hasn't caught on."

William Meng
Corporate Procurement Manager
The Southern Company

Expanding collection of materials and improving recyclability

Many WasteWi$e partners have aggressively sought to increase the amount of materials collected for recycling or to design their products to increase recyclability. Both activities can help an already-successful recycling program conserve even more material.

- **University of Notre Dame** increased collection of corrugated to more than 460,000 pounds in 1995 by banning the disposal of corrugated boxes and requiring students to recycle boxes used during move-in to residence halls.
- **Texaco** expanded its collection programs for corrugated, mixed plastics, glass, and wood to several new facilities in 1995. This expansion enabled the company to collect more than one million pounds of recyclables.
- **AMD,** an integrated circuits manufacturer, increased the recycled content and recyclability of its product packaging materials. Its product shipping boxes have been replaced with boxes that contain a minimum of 65 percent postconsumer content and are more easily recycled in AMD's local markets. AMD also facilitated the recycling of its plastic device tubes by replacing nylon pins with pins made of the same plastic resin.
- **General Motors Corp.** developed a Recycling Design Guide to aid the General Motors community in designing vehicles whose parts can be easily removed and recycled.

Snapshot of Recycling Collection Programs

New Materials Collected in 1995

Sixty-five companies added new materials and products to their recycling collection programs in 1995. The most common new additions were:

- Corrugated boxes
- Magazines
- Newspaper
- Aluminum cans
- High-grade copier paper
- Glass bottles

Impressive Volumes Collected

- **General Motors** recycled 3.6 billion pounds of paper, plastic, metals, and wood.
- **Navistar International Transportation Corp.** recycled more than 86 million pounds of ferrous materials.
- **Motorola** recycled more than 30 million pounds of materials across 33 facilities.
- **Public Service Electric & Gas Co.** recycled more than 18 million pounds of concrete and asphalt.
- **CSX Transportation** recycled 759 million pounds of materials in 1995.
- **Compaq Computer Corporation** recycled more than 22 million pounds of various materials.

Recycling Collection Generates Revenue

- **Seagate Technology** earned revenue of $1.3 million from the sale of materials including metals, plastics, and paper.
- **Baxter** earned revenue of $5 million from the sale of recovered materials including corrugated, plastics, and aluminum.
- **Xerox** saved $7.8 million in disposal costs through its recycling efforts.
- **American Standard's** savings and revenue totaled $744,000.

Purchase or Manufacture of Recycled Products

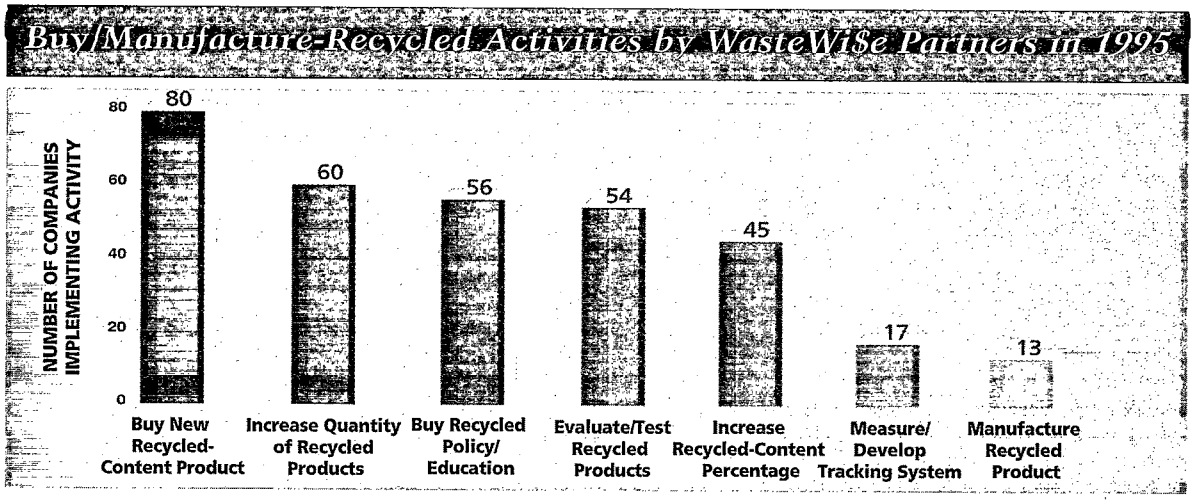
In 1995, 160 WasteWi$e partners reported on their efforts to increase purchases of recycled-content products. This section summarizes major activities implemented by WasteWi$e partners, including purchasing new products that contain recycled content, increasing the percentage of recycled content or the number of recycled-content products already purchased, educating employees on buying recycled, testing the performance of new recycled products, tracking buy-recycled purchases, and using recovered materials to manufacture new products. In all, WasteWi$e partners purchased more than two million tons of recycled-content products in 1995. Figure 4 summarizes activities reported by WasteWi$e partners in 1995.

Purchase New Products Made With Recycled Content

In 1995, 80 WasteWi$e companies reported purchasing products made with recycled content that they had not previously purchased. As with any new purchase, evaluating the performance of recycled-content products can be an important first step before purchasing. Fifty-four WasteWi$e partners reported that they evaluated or tested recycled-content products ranging from standard office products to transparencies to polypropylene fabric storage bags. Some of the recycled-content products newly purchased by WasteWi$e companies in 1995 are described below.

- **The Great Atlantic and Pacific Tea Company** purchased more than 500 tons of cash register tape with 50 percent postconsumer content for all its supermarkets.
- **Allergan** purchased more than one million pounds of 15 percent postconsumer paper for product inserts.
- **McDonald's** acquired more than eight million pounds of 18 percent postconsumer paperboard hamburger boxes.
- **Commonwealth Edison** initiated the use of 100 percent recycled-content paper for all intra-company memos and copies.
- **Sligo Adventist School** purchased 100 percent recycled-content playground equipment, which it found to be "far superior" to competitive products made from virgin materials.

Figure 4



Through their purchasing, some companies take "closing the loop" a step further by taking direct responsibility for the recyclable materials they collect. These companies arrange to purchase products that are actually made with their own collected recyclables.

- **NYNEX Corporation** tested the use of 100 percent recycled-content return payment envelopes that contain 50 percent old telephone directories. Full implementation of the product commenced in February 1996.
- **The Walt Disney Company** tested theme park trash can liners that contain 30 percent postconsumer content, including a percentage of the company's old liners.
- **State Farm Mutual Automobile Insurance Company** is purchasing letterhead made from the company's recycled office paper after successfully testing the product.

Increase the Amount of Recycled Content in Products Purchased

Forty-five WasteWi$e companies increased the amount of recycled content in products they were already buying.

- **Virco Manufacturing** raised the recycled content of corrugated cartons purchased to 60 percent. The company acquired 4.5 million pounds of the containers in 1995.
- **Chrysler Corporation** maximized recycled content by purchasing more than 1.2 million pounds of 100 percent recycled-content computer paper.
- **Maytag's** Newton Laundry Products increased recycled content in 2.7 million pounds of corrugated cartons from 40 percent to 100 percent recycled content.

Recycled Products Most Frequently Purchased by WasteWi$e Partners

- Copier paper
- Computer and printer paper
- Stationery (letterhead, business cards, envelopes)
- Folders and binders
- Toner cartridges
- Paper towels
- Toilet paper
- Corrugated containers and boxes
- Packaging material and filler

Increase the Quantity of Products Purchased With Recycled Content

In 1995, 60 WasteWi$e partners reported on activities to increase the amount of recycled products they were already purchasing.

- **Navistar International Transportation Corp.** increased the purchase of 100 percent recycled-content corrugated containers to 1.3 million pounds.
- **Dow Corning Corporation** expanded its buy-recycled program by 50 percent in 1995, spending more than $7 million on a variety of products with recycled content.
- **The Coca-Cola Company** spent more than $2 billion on recycled-content purchases in 1995.
- **Target Stores** increased its purchase of plastic bags with 25 percent recycled content to nearly seven million pounds.

Strengthen Institutional Support for Buying Recycled

Establishing a policy for purchasing recycled products can help to ensure that buying recycled is institutionalized in a company. Similarly, educating purchasing officials, other employees, and suppliers about buy-recycled opportunities can build institutional support for buy-recycled practices. Thirty WasteWi$e partners reported developing buy-recycled policies or guidelines in 1995; another 26 companies took action to educate employees or others on buying recycled.

- **Motorola** developed a policy requiring recycled content in all inbound packaging and a minimum of 35 percent recycled content in outbound packaging.
- **The DuPont Merck Pharmaceutical Company** initiated a policy requiring all advertising, promotional literature, letterhead, business cards, and envelopes to be printed on recycled paper.
- **Western Resources** has a buy-recycled policy that allows its purchasing department to give a price preference on the first $100,000 worth of recycled products it buys.
- **Compaq Computer Corporation** specifies that corrugated shipping boxes for its products must contain a minimum of 35 percent postconsumer content.
- **Holston Defense Corporation** encourages employees to use recycled-content supplies and used its monthly newsletter to list products available for purchase.

Establish a System to Track and Measure Recycled-Content Purchases

Seventeen WasteWi$e companies initiated systems to track or measure recycled-content purchases. For example, **Northeast Utilities Service Company** worked with its office supply distributor to develop a software program to track recycled products purchased and dollars spent. This service is now available to all the distributor's customers. Other companies that developed computer tracking systems include **Abbott Laboratories, Dow Corning Corporation,** and **CITGO Petroleum.**

Manufacturing Products With Recovered Materials

With consumer demand for recycled products growing, manufacturers are working to increase the supply of these products. In 1995, 13 WasteWi$e partners increased the amount of postconsumer material in the products they manufacture.

- **Ford Motor Company** issued worldwide automotive recycling guidelines to its suppliers and engineers. Not only do these guidelines review design for disassembly, they also describe how to include materials made from recycled content. Some activities underway include manufacturing plastic parts containing 25 percent recycled content in all 25 million parts produced annually at one plant; manufacturing new taillight housings and bumper guide brackets using material salvaged from plastic bumpers; manufacturing polypropylene splash shields made out of old battery casings; manufacturing grille opening reinforcements, luggage rail racks, and trunk carpeting made from recycled soda bottles; and manufacturing headlamp housing made from plastic water cooler bottles.
- **Louisiana-Pacific** used nearly 15 million pounds of postconsumer newspaper in its wall and ceiling panel products and recycled nearly 482 million pounds of wood by-products into marketable soil amendments.
- **Stone Container** used 3.5 billion pounds of corrugated, mixed paper, and newspaper to manufacture 34 percent postconsumer content boxes and bags. More than 45 million pounds of these materials were collected from the company's customers, particularly small companies that do not have their own recycling programs.
- **Truck-Lite,** Wellsboro, Pennsylvania facility, is evaluating using recycled plastic to manufacture molded plastic plugs and connectors used in truck electrical systems.

Kodak Recycles One Billion Rolls of Film

Hundreds of wholesale photographic processing labs and thousands of minilabs in the United States voluntarily collect materials from 135 mm film for recycling, using collection and shipping receptacles provided by the Eastman Kodak Company. Promotional materials are created and provided to these labs and retailers by Kodak, allowing them to publicize their participation in this recycling program to their customers. Kodak accepts 135 mm film materials from all manufacturers. The company recycles or reuses these materials, which include the polystyrene spool and the steel on either end of the spool, the steel cartridge itself, and the polyethylene container and lid.

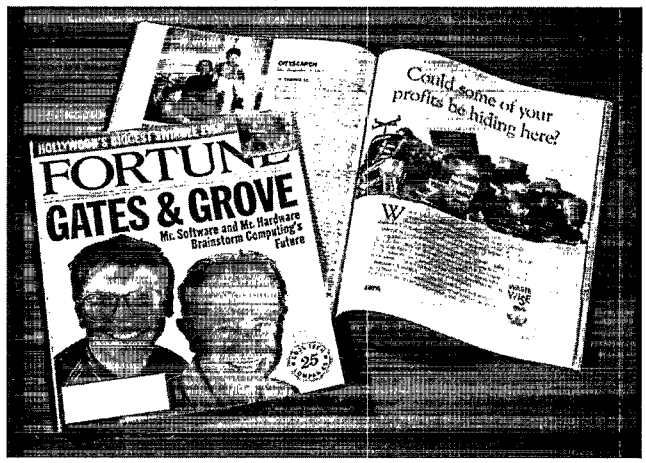
These recovered materials are used to make new container bottoms with 25 percent recycled plastic, as well as notebooks and wire fencing. Using the recycled plastic from the collected containers and lids to make new container bottoms is a good example of closed-loop recycling. Kodak recycled its billionth roll of 135 mm film during Earth Month 1996, diverting 29 million pounds of material from landfills.

WasteWi$e Program Services

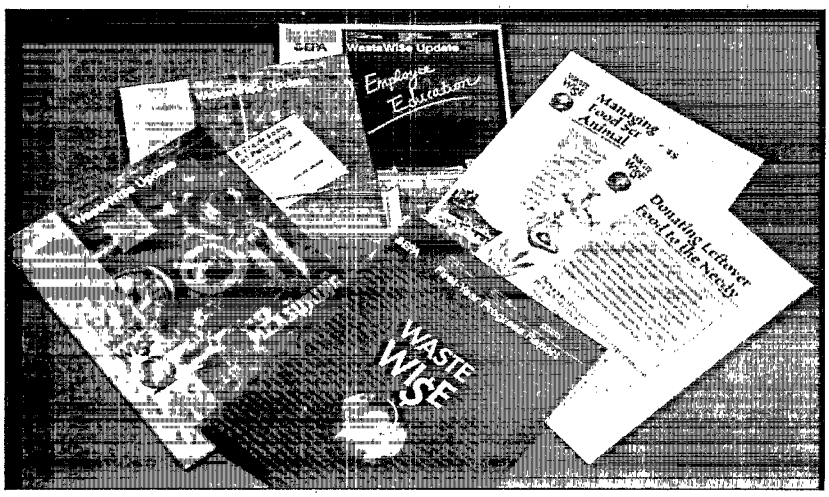
WasteWi$e offers numerous services to its partners. The WasteWi$e helpline is available to answer general questions about the program as well as technical questions on specific waste reduction topics. In addition, each partner has access to an individual WasteWi$e representative who can provide assistance in designing and implementing a waste reduction program. WasteWi$e staff have access to an extensive library as well as the WasteWi$e *Resource Guide*, a compendium of up-to-date information about waste reduction resources throughout the country. Other WasteWi$e services include national recognition for waste reduction successes, technical publications, and access to a peer network.

"WasteWi$e helps us by providing focus, peer contacts, ideas, and support. We find the WasteWi$e Update to be an outstanding newsletter and exceptional resource."

Fred Kaeser
Environmental Manager
United Technologies Corp.



▶ ***WasteWi$e kicked off a promotional campaign with a public service announcement printed in prominent business magazines including Fortune.***



▲ ***WasteWi$e distributed several technical publications to its partners in 1995. These documents include the WasteWi$e Update, tip sheets, and the First-Year Progress Report.***

WasteWi$e Services

National recognition for waste reduction successes

Individual WasteWi$e representatives

Helpline and extensive library of resources

Tip sheets on brief topics

WasteWi$e Update newsletter

Routine bulletins

Peer network

Workshops and conferences

▲ *A WasteWi$e information specialist provides assistance to a partner via the WasteWi$e helpline.*

Partners Ask, WasteWi$e Answers

Below are some typical questions WasteWi$e staff have addressed for partners by providing technical resources and referrals. Partners can call the helpline at 800 EPA-WISE.

Waste Prevention

- How can I begin a food scraps composting program?
- Can you help me locate a materials exchange in my area?
- How can I reduce paper use in my office?
- What are some ways to reduce transport packaging?
- What are some methods for managing wood pallets?

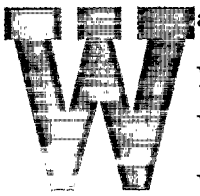
Recycling

- Where can I recycle mixed plastic in my community?
- What information is available on plastics recycling?
- How can I recycle scrap tires?
- How can I find a hauler for my recyclables?

Buy Recycled

- Where can I find distributors for recycled-content products?
- How can I work with my vendors to purchase products with recycled content?
- What are some typical products made with recycled content?

Looking Ahead



asteWi$e plans to build on the strong foundation of its first two years to expand participation in the program, strengthen services for WasteWi$e partners, and develop more in-depth information on waste reduction in specific business sectors.

Expanding WasteWi$e Participation

In its first two years, WasteWi$e targeted primarily large businesses for participation, focusing on their considerable influence in purchasing and materials use, and their particular needs when developing services and information. As the program grows, we will encourage participation by other organizations as well, including universities and other institutions, and government agencies.

Strengthening Services for WasteWi$e Partners

WasteWi$e already offers an array of services intended to strengthen and assist company waste reduction programs, including a WasteWi$e representative dedicated to each partner, a helpline and extensive library of resources, tip sheets on brief topics, and the WasteWi$e Update newsletter which features partners' successful waste reduction efforts. Much of our technical assistance information emphasizes waste prevention, an area of great cost-saving opportunity for companies and for which information may not be available through other sources. Future technical assistance will focus on areas of biggest cost-saving opportunity, such as transport packaging and office paper reduction. Additional services that WasteWi$e plans to develop for its partners include an Internet chat group where partners can query and respond to specific questions, simple and practical methods for estimating cost savings and waste reductions from selected waste prevention actions, and optional electronic reporting and goal-setting.

Profiling Sector-Specific Waste Reduction Strategies

Working with a large and diverse set of companies enables WasteWi$e to gather insights on waste reduction strategies that appear especially beneficial to a particular business sector, by virtue of potential cost savings or other benefits. While WasteWi$e routinely shares this type of information with partners, we see an opportunity to develop more in-depth information on waste reduction practices for specific business sectors. This information would be intended to spur additional organizations in these sectors to adopt the high-impact practices. WasteWi$e is piloting this approach with a study of electric utilities, interviewing utility WasteWi$e partners to identify their highest impact waste reduction practices and documenting the practices and their benefits. The report will be available in early 1997. If this approach is successful, WasteWi$e will implement it with other business sectors.

In addition to the plans detailed here, the WasteWi$e staff will continually evaluate the program, looking for ways to improve its efficiency and value to partners. We encourage all WasteWi$e partners to give us specific feedback on the program and its services so we can continue to evolve and improve. For organizations that are not WasteWi$e participants, we invite you to join in this cost-saving and innovative effort to reduce solid waste.

WASTE WI$E

Registration Form

❑ **My company is ready to become a WasteWi$e partner.**
(Please complete sections A and B)

❑ **I would like more information about the program.**
(Please complete section A)

How did you hear about the WasteWi$e program?

❑ Periodical/Publication (Name) _____

❑ Workshop/Conference (Sponsor) _____

❑ Trade Association (Name) _____

❑ Other EPA Program (Name) _____

❑ PSA/Advertisement (Location) _____

❑ Another Company (Name) _____

❑ Other (Specify) _____

Section A

Company Name: _____

Company SIC Code: _____

Check if a ❑ subsidiary or
❑ division. Name of parent company (if applicable): _____

Principal Contact: _____ Title: _____

Address: _____

City: _____ State: _____ Zip: _____

Phone Number: _____ Fax: _____

Section B

My company is ready to become a WasteWise partner!
Please send a membership packet.

Facilities to be included in initial waste reduction efforts:
(e.g., corporate headquarters only, regional facilities, all plants)

_____

Approximate total number of employees in these facilities: _____

Signature of Senior Official: _____

Print Name: _____ Title: _____

Date: _____

Please cut and mail to the WasteWi$e program at the address indicated.
Or, fax to WasteWi$e at 703-308-8686
For more information call the WasteWi$e helpline at 1-800-EPA-WISE.

WASTE WI$E

PLEASE PUT STAMP HERE

WasteWi$e (5306W)
U.S. Environmental Protection Agency
401 M Street, SW.
Washington, DC 20460

WASTE WI$E

WasteWi$e Materials Order Form

Please indicate the number of copies of each material that you are requesting and fax this form to EPA at (703) 308-8686 or mail to the WasteWi$e program at WasteWi$e (5306W), U.S. Environmental Protection Agency, 401 M Street, SW., Washington, DC 20460. Please call the WasteWi$e Helpline at 1-800-EPA-WISE if you have questions concerning the program.

Organization _____

Contact _____

Address _____

Phone # _____ Fax # _____

Materials About WasteWi$e

☐ ***WasteWi$e: EPA's Voluntary Program for Reducing Business Solid Waste*** (18 pp.)

Describes key aspects of the WasteWi$e program.

☐ ***WasteWi$e "First Year Progress Report"*** (26 pp.)

Highlights the program's eventful first year and shares the impressive results achieved by WasteWi$e partners in 1994.

☐ ***WasteWi$e "Second Year Progress Report"*** (28 pp.)

Highlights the second successful year of the program and presents the outstanding achievements of WasteWi$e partners in 1995.

☐ ***Put Your Business on the Waste Cutting Edge: Join WasteWi$e*** (2 pp.)

Briefly outlines the WasteWi$e program.

☐ ***Endorser Program Fact Sheet*** (2 pp.)

Describes key aspects of the WasteWi$e Endorser program, designed for trade associations and other membership-based organizations who want to promote WasteWi$e to their members.

Waste Reduction Publications

☐ ***Business Guide for Reducing Solid Waste*** (41 pp. plus worksheets & appendices)

Offers step-by-step guidance on establishing a waste reduction program, including conducting a waste assessment (detailed worksheets included), establishing a waste reduction team, and developing goals.

☐ ***Waste Prevention Pays Off: Companies Cut Waste in the Workplace*** (24 pp.)

Provides a brief overview of waste prevention goals and strategies that are working for different types of businesses (includes case studies).

☐ ***WasteWi$e Update "A Fresh Look at Packaging"*** (12 pp.)

Describes successful packaging reduction efforts undertaken by WasteWi$e partners.

☐ ***WasteWi$e Update "Measuring Waste Reduction"*** (12 pp.)

Explains techniques and tools partners have used for measuring the effectiveness of waste prevention.

☐ ***WasteWi$e Update "Employee Education"*** (12 pp.)

Focuses on employee education as a key element of a successful waste reduction program.

- ☐ ***WasteWi$e Update "Going Paperless with Technology"*** (12 pp.)

  Examines technologies used by WasteWi$e partners to reduce office paper.

- ☐ ***Waste Prevention: It Makes Good Business Sense*** (1 page)

  Outlines the benefits of waste prevention and contains an order form for EPA's Waste Prevention Pays Off and Business Guide for Reducing Solid Waste publications.

- ☐ ***Buy-Recycled Guidebook***, published by the National Recycling Coalition's Buy Recycled Business Alliance (24 pp. plus appendices)

  Offers step-by-step advice on implementing a successful recycled products purchasing program.

- ☐ ***Reusable Transport Packaging Directory***, published by Minnesota Office of Waste Management (42 pp.)

  Provides descriptions of various types of reusable packaging options for transporting goods and lists of vendors.

- ☐ ***Source Reduction Now***, published by Minnesota Office of Waste Management (116 pp.)

  Describes in detail how to establish and implement a waste reduction program, including measurement ideas, company case studies, and educational signs.

Tip Sheets

Tip sheets provide guidance on a variety of waste reduction issues (1-6 pp. each)

- ☐ Facility Waste Assessments
- ☐ Waste Prevention
- ☐ Recycling Collection
- ☐ How to Start or Expand a Recycling Collection Program
- ☐ Buying or Manufacturing Recycled Products
- ☐ Buy-Recycled Resources
- ☐ Buy-Recycled Questions and Answers
- ☐ Donating Leftover Food to the Needy
- ☐ Managing Food Scraps as Animal Feed
- ☐ PackTrack: Software to Measure Reductions in Products and Packaging
- ☐ Waste Accounting for Utilities: Software to Track and Reduce

WasteWi$e Forms

- ☐ Partner Registration Form
- ☐ Goals Identification Form
- ☐ Sample Goals Identification Form
- ☐ Annual Reporting Form
- ☐ Sample Annual Reporting Form
- ☐ Endorser Registration Form

WasteWi$e Welcomes Endorsers Joining in 1995

The Aluminum Association, Inc.

American Iron and Steel Institute

American Plastics Council

American Road and Transportation Builders Association

American Textile Manufacturers Institute

Association of Ohio Recyclers

Business and Institutional Furniture Manufacturers Association

Direct Marketing Association, Inc.

DuPage Clean and Beautiful

Edison Electric Institute

Electronic Industries Association

Food Marketing Institute

Foodservice & Packaging Institute

The Glass Packaging Institute

"Green" Hotels Association

Grocery Manufacturers of America

Illinois Recycling Association

Institute of Packaging Professionals

Michigan Recycling Coalition

National Association for Environmental Management

National Association of Photographic Manufacturers, Inc.

National Automobile Dealers Association

National Retail Federation

National Soft Drink Association

National Wooden Pallet and Container Association

Newspaper Association of America

Polystyrene Packaging Council

Steel Manufacturers Association

Steel Recycling Institute

Toy Manufacturers of America, Inc.

USA Recycling Services

The Vinyl Institute

Virginia Recycling Association

WasteCap of New Hampshire

Water Foundation

EPA
United States
Environmental Protection Agency
401 M Street, SW. (5306W)
Washington, DC 20460

Official Business
Penalty for Private Use
$300

Printed on paper that contains at least 20 percent postconsumer fiber.